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REMARKS

Claims 1-43 remain pending in the instant application. Claims 1, 15, 19, 30, 36 and 42 are amended without new matter, pursuant support from the specification as noted herein below. Claims 1-43 stand rejected. It is believed that the claim amendments and the remarks submitted herewith attend to all issues raised in the Office Action dated September 21, 2005.

Claim Rejections – 35 U.S.C. § 102

Claims 1-2, 5-7, 9, 13, 15-18, 29-31, 36 and 41-43 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,377,739 ("Richardson"). We respectfully disagree, for at least the reasons laid out herein below.

Before addressing the Examiner's specific rejections, a brief overview of the instant application and Richardson may be helpful. The instant application recites a method and apparatus to effectively reduce a non-active detection gap of an optical sensor, for example using optical fibers. The gap reduction apparatus of the instant application is for example used with an optical sensor 200 to obtain an optical image over a field of view 10, and "serves to orient ends of the optical fibers close together at a first fiber optic face plate." Specification p. 9, lines 13-14. The opposite ends of the optical fibers distribute image components to an optical sensor, and "are further separated from each other than the ends of the optical fibers 130 coupled to the first fiber optic faceplate 110." Specification p. 10, lines 2-3; see also p. 3, lines 12-15.

As shown and described, faceplate 110 is proximate field of view 10, over which the optical image is obtained. The second fiber optic faceplate 120 is proximate an optical sensor, and may be mounted to the optical sensor. Optionally, the further-spaced ends of the optical fibers may mount directly with elements of the optical sensor. See Specification p. 13, lines 4-12; FIG. 2. As shown and described, the ends of the optical fibers at an image-receiving end are closer together than they are at an image-distributing end.

Richardson recites a two dimensional fiber optic output array that writes data to a recording surface. Optical fibers connect to diodes at one end, and are inserted into spacing fixtures at an output end. "Data which modulates the output from a diode is connected by coupling optics 2a, 2b, 2c to the fibers" Richardson col. 3, lines 41-43.

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The modulated data is then optically emitted by the fibers at an output end, at a reduced track spacing. See Richardson col. 2, lines 30-36; col. 3, line 39 – col. 4, line 5; FIGs. 2, 3.

Richardson specifies that "the center to center separation at the output end of the fibers d is much less than the diode separation A." Richardson col. 3, lines 47-48. Richardson thus teaches an orientation of optical fibers that is essentially opposite the orientation recited in the instant application. In other words, Richardson teaches optical fibers that are farther apart at an input end and closer together at an output end. On the other hand, the instant application recites optical fibers that are farther apart at an end that distributes image components to an optical sensor (output) and closer together at an image-obtaining (input) end.

Furthermore, not only does Richardson teach opposite geometries, it is intended for a fundamentally different purpose. Richardson strives to reduce the pitch of output tracks written from a diode input (e.g. "reduce the effective track spacing on the recording surface," Richardson col. 2, lines 65-66), whereas the instant application "addresses the difficulties of the prior art by the use of optical fibers oriented to obtain visual images from a field of view at one location and distribute components of the optical images to more widely-spaced sensor elements of one or more optical sensors. This can enhance the optical congruence of the image obtained through the more widely-spaced sensor elements and eliminate inaccuracies caused by non-active optical gaps in the sensors." Page 7, lines 6-11. In other words, the instant application provides for increasing the pitch of the output.

Independent Claim 1: Richardson does not recite, depict or suggest a second optical fiber having a first end oriented toward a field of view and located a first distance, less than said first width (between first and second linear arrays of sensor segments), from a first end of a first optical fiber and a second end oriented toward a sensor segment of said second linear array. Richardson therefore does not anticipate claim 1 "as is". However, for the sake of clarity, claim 1 is amended to better recite the spacing of optical fibers relative to one another. Claim 1 now recites an optical sensor apparatus for effectively reducing a non-active gap, including:

(a) an optical sensor having a first linear array of sensor segments and a second linear array of sensor segments separated by a first non-active gap having a first width;

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- (b) a first optical fiber having a first end oriented toward a field of view and a second end oriented toward a sensor segment of said first linear array of sensor segments; and
- (c) a second optical fiber having a first end oriented toward said field of view and located a first distance, less than said first width, from said first end of said first optical fiber and a second end oriented toward a sensor segment of said second linear array of sensor segments and located a second distance, greater than said first distance, from said second end of said first optical fiber, thereby enhancing optical congruence of said first linear array and second linear array in relation to each other.

These amendments are supported by the Specification, for example at p. 9, lines 13-14 and p. 10, lines 2-3, quoted herein above. Support may also be found at p. 3, lines 12-15, among other locations in the Specification.

As noted in the above summary, Richardson recites optical fibers that are farther apart at an input end and closer together at an output end. Richardson therefore does not teach or suggest, at least, claim element (c): a second optical fiber having a first end oriented toward a field of view and located a first distance...from a first end of a first optical fiber, and a second end oriented toward a sensor segment ...and located a second distance, greater than said first distance, from said second end of said first optical fiber. Pursuant MPEP §2131, Richardson cannot anticipate claim 1 because Richardson fails to teach every element of the claim. We respectfully request withdrawal of the Examiner's rejection.

Dependent Claims 2, 5-7, 9 and 13: These claims depend from claim 1, and benefit from like argument. However, these claims recite additional elements that are not taught by Richardson, including but not limited to the following:

Claim 2: Claim 2 requires a third linear array of sensor segments separated from said second linear array of sensor segments by a second non-active gap having a second width, said optical sensor apparatus further comprising a third optical fiber with a first end oriented toward the field of view and located a third distance, less than the second width, from the first end

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of the second optical fiber and a second end oriented toward a sensor segment of said third linear array of sensor segments.

Richardson does not teach any optical fibers having ends oriented towards a field of view that are closer together and ends oriented towards a sensor segment that are farther apart. Richardson therefore cannot and does not teach second and third optical fibers that are so arranged. See, e.g., remarks regarding patentability of claim 1.

Claim 5: Claim 5 requires that the first ends of the first and second optical fibers be arranged in a single column. The Examiner points to Richardson col. 3, lines 39-66 to substantiate the rejection of claim 5; however, this section of Richardson teaches output ends of optical fibers arranged in rows. See, e.g., Richardson col. 3, lines 49-56. This is different from ends of optical fibers being arranged in a column, as in claim 5.

Moreover, we submit that Richardson does not teach the limitations of claims 2, 5-7, 9 and 13 in the context of claim 1. As Richardson fails to teach each and every element of claim 1, and the subsequent elements introduced in claims 2, 5-7, 9 and 13, withdrawal of the rejection is respectfully requested.

Independent Claim 15: Although we believe that Richardson fails to anticipate claim 15 "as is", independent claim 15 is also amended to clarify the spacing of optical fibers relative to one another. Amended claim 15 recites an optical sensor apparatus for effectively reducing a non-active gap, including:

- (a) a tri-linear optical sensor having
 - a first linear sensor element and
 - a second linear sensor element separated by a first non-active gap having a first width and
 - a third linear sensor element separated from said second linear sensor element by a second non-active gap having a second width;
- (b) a first optical fiber having a first end oriented toward a field of view and a second end oriented toward a sensor segment of said first linear sensor element;
- (c) a second optical fiber having a first end oriented toward said field of view and located a first distance, less than said first width, from said first end of

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- said first optical fiber and a second end oriented toward a sensor segment of said second linear sensor element and located a second distance, greater than said first distance, from said second end of said first optical fiber; and
- (d) a third optical fiber having a first end oriented toward said field of view and located a third distance, less than said second width, from said first end of said second optical fiber and a second end oriented toward a sensor segment of said third linear sensor element and located a fourth distance, greater than said third distance, from said second end of said second optical fiber.

As noted with respect to claim 1, Richardson recites optical fibers that are farther apart at an input end and closer together at an output end. Richardson does not teach or suggest optical fibers that are closer together at ends oriented toward a field of view than at ends oriented towards a sensor, as in claim elements (c) and (d). Richardson therefore fails under 35 U.S.C. §102(b). Withdrawal of the Examiner's rejection is thus respectfully requested.

Dependent Claims 16-18: Claims 16-18 depend from claim 15, and benefit from like argument. However, additional reasons for patentability of claims 16-18 over Richardson include the following:

Claim 16: Claim 16 requires that each of the first, second and third optical fibers includes a plurality of optical fibers. The first and second pluralities of optical fibers would therefore be arranged with ends closer together proximate a field of view and ends farther apart proximate a sensor apparatus. Likewise, the second and third pluralities would be arranged with ends closer together proximate a field of view and ends farther apart proximate a sensor apparatus. Richardson does not teach or suggest optical fibers having ends oriented towards a field of view that are closer together than ends oriented towards a sensor segment, at all. Richardson therefore cannot and does not teach first, second and third pluralities of optical fibers arranged in such a manner. See, e.g., remarks regarding patentability of claim 1.

Moreover, Richardson does not teach the limitations of claims 16, 17 and 18 in the context of claim 15. As Richardson fails to teach each and every element of claim 15 and the

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subsequent elements introduced in claims 16-18, withdrawal of the rejection is respectfully requested.

Independent Claim 29: Claim 29 recites an apparatus for effectively reducing a non-active gap of an optical sensor, including:

- (a) a first optical fiber and a second optical fiber mounted to each other such that a first end of said first optical fiber and a first end of said second optical fiber are oriented toward a field of view; and
- (b) a first spacer mounted between a second end of said first optical fiber and a second end of said second optical fiber to locate said second end of said first optical fiber and said second end of said second optical fiber further apart than said first end of said first optical fiber and said first end of said second optical fiber and to correspond to elements of an optical sensor.

Again, Richardson does not teach first and second optical fibers that are located further apart at ends corresponding to elements of an optical sensor than at ends proximate a field of view. Neither does Richardson teach a spacer mounted between second ends of optical fibers, to locate the second ends further apart than the ends oriented toward the field of view. As shown in FIG. 2, the output ends of fibers 3a-3c are closer together than the input ends. In other words, "the center to center separation at the output end of the fibers d is much less than the diode separation A." Richardson col. 3, lines 47-48; FIG. 2. Spacing fixtures 4, 5 and 6 maintain separation of the output ends of fibers 3a-3c; thus, Richardson's spacing fixtures hold the output ends closer together than the input ends. See Richardson col. 3, lines 39-53; FIG. 2. This is essentially the opposite of applicants' spacers for locating second (image distributing) ends of fibers further apart than first (image obtaining) ends. Richardson therefore fails to teach all of the elements of claim 29, and cannot anticipate the claim.

Dependent Claims 30-31: Claims 30 and 31 depend from claim 29, and thus benefit from like argument. Furthermore, claim 30 requires a third optical fiber with a first and second end, the first end oriented toward a field of view and closer to a neighboring (second) optical fiber than the second end. Claim 30 also requires that the optical sensor of claim 29 (having the

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spacing of optical fibers described therein), be a tri-linear optical sensor. Richardson does not teach a third optical fiber with the above-described spacing between ends, nor does Richardson teach a tri-linear optical sensor with the spacing between ends of optical fibers recited in claim 29.

Richardson also fails to teach the limitations of claim 31, in the context of claim 29. Withdrawal of the Examiner's rejection is respectfully requested, because Richardson does not teach each of the limitations of claims 29-31.

Independent Claim 36: Claim 36 recites a method of effectively reducing a non-active gap of an optical sensor. As with independent claims 1, 15 and 29, claim 36 requires optical fibers that are further apart at ends oriented towards linear sensor elements than they are at ends oriented towards a field of view. Claim 36 is amended herein to clarify this spacing of optical fibers. For example, among other steps, amended claim 36 recites:

"...orienting a second end of said second optical fiber toward said second linear sensor element and at a second distance, greater than said first distance, from said second end of said first optical fiber;"

and

"orienting a second end of said third optical fiber toward said third linear sensor element and at a fourth distance, greater than said third distance, from said second end of said second optical fiber;"

Neither of these steps are recited or suggested in Richardson, namely because Richardson teaches a greater distance between input ends of optical fibers, and a lesser distance between output ends of the fibers.

Dependent Claim 41: Claim 41 depends from claim 36, and benefits from like argument. Furthermore, Richardson does not teach or suggest the limitations of claim 41 in the context of claim 36. For example, Richardson does not teach optical fibers with second ends mounted to linear sensor elements and first ends oriented towards a field of view, where the second ends are spaced further apart than the first ends.

Independent Claim 42: Claim 42 recites an apparatus for effectively reducing a non-active gap of an optical sensor, including:

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- means for obtaining optical information from a field of view; and
- means for orienting said optical information to at least two linear sensor elements of at least one optical sensor so as to enhance an optical congruence capability of said optical sensor.

Pursuant MPEP 2181(I), "a claim limitation will be interpreted to invoke 35 U.S.C. § 112, sixth paragraph, if it meets the following 3-prong analysis:

- (A) the claim limitations must use the phrase "means for" or "step for;"
- (B) the "means for" or "step for" must be modified by functional language; and
- (C) the phrase "means for" or "step for" must not be modified by sufficient structure, material or acts for achieving the specified function."

We submit that the limitations of claim 42 meet the above three required criteria.

The following is a quote from 35 U.S.C. 112, sixth paragraph:

"An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and *such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.*" (emphasis added).

Furthermore,

"The plain and unambiguous meaning of paragraph six is that one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure." *In re Donaldson*, 16 F.3d 1189, 29 U.S.P.Q.2D 1845 (Fed. Cir. 1994).

We submit that Richardson does not teach or suggest applicant's means for obtaining or applicant's means for distributing, as described in the specification. For example, applicant clearly recites "the use of optical fibers oriented *to obtain visual images* from a field of view at one location *and distribute components of the optical images to more widely-spaced sensor*

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elements of one or more optical sensors." Specification p. 3, lines 12-15. Applicant's optical fibers are described as oriented closer together at a first ends, proximate a field of view, and further apart at second ends, oriented toward a sensor element: "The ends of the optical fibers 130 that are coupled to the second fiber optic faceplate 120 are further separated from each other than the ends of the optical fiber 130 coupled to the first fiber optic faceplate 110." Specification p. 10, lines 1-3. As previously noted, Richardson does not teach optical fibers having such an orientation.

Dependent Claim 43: Claim 43 depends from claim 42, and thus benefits from like argument. Furthermore, claim 43 requires means for positioning said means for obtaining in relation to said optical sensor. We submit that the means for positioning of claim 43 also invokes 35 U.S.C. 112, sixth paragraph. We note that Richardson does not teach or suggest applicant's means for positioning. For example, Richardson does not teach or suggest spacers for locating second ends of optical fibers (oriented toward a sensor) further apart than first ends of the optical fibers (oriented toward a field of view):

"The separation of the second ends of the optical fibers may involve at least one spacer for proper positioning. The apparatus for effectively reducing a non-active gap of an optical sensor may have a first optical fiber and a second optical fiber are mounted such that a first end of the each optical fiber is oriented toward the field of view and the second end is directed towards a sensor. A first spacer is mounted between the second end of the first optical fiber and the second end of the second optical fiber to locate the second ends further apart than the first ends so as to correspond to elements of an optical sensor." Specification, p. 5, lines 10-17; and

"The spacers 440 form components that may be assembled as shown in FIG. 9 such that a first end 322, 324, 326 of the elements 312, 314, 316 may be aligned with elements of an optical sensor and a second end 332, 334, 336 of the elements 312, 314, 316 may be oriented toward a field of view, such as, for example, a focal plane." Specification, p. 15, lines 13-17.

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Claim Rejections – 35 U.S.C. § 103

Richardson in view of Gordon

Claims 3, 8, 10-12, 14, 32 and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Richardson in view of U.S. Patent No. 5,061,036 ("Gordon").

Respectfully, we disagree with and traverse the rejection of claims 3, 8, 10-12, 14, 32 and 37, since the cited patents do not render the claims *prima facie* obvious. The following is a quotation from the MPEP setting forth the three basic criteria that must be met to establish a *prima facie* case of obviousness:

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP, §2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

It is fundamental to 35 U.S.C. §103 that each and every limitation of the claim elements must be taught or suggested; however, Richardson in view of Gordon fails to teach or suggest all the limitations of claims 3, 8, 10-12, 14, 32 and 37.

As noted above, Richardson does not teach an optical sensor apparatus having optical fibers that are further apart at ends oriented toward an optical sensor than they are at ends oriented toward a field of view. Claims 3, 8, 10-12 and 14, claim 32 and claim 37 all inherit this unique limitation from respective base claims 1, 29 and 36. Gordon also fails to teach or suggest an optical sensor apparatus having optical fibers that are further apart at ends oriented toward an optical sensor than they are at ends oriented toward a field of view. Rather, Gordon teaches against optical fibers spaced in this manner, by depicting a scanner 10 including a fiber optic bundle with linear face 12, where light enters, and area face 13, which is oriented toward a photosensor array 16. See Gordon col. 2, lines 36-44; FIG. 1. As shown in FIG. 1, fiber ends at linear face 12 are further apart than fiber ends at area face 13, which is oriented toward sensor array 16. This is also opposite the spacing of applicant's optical fibers.

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Claims 3, 8, 10-12, 14, 32 and 37 are non-obvious over Richardson in view of Gordon, for at least this reason. However, additional reasons for patentability of claims 3, 8, 10-12, 14, 32 and 37 include the following:

Claims 3, 8 and 10-12: Richardson in view of Gordon also fails to teach the limitations of these claims, in the context of independent claim 1

Claim 14: The Examiner states that "Gordon et al teach lens between field of view." Office Action p. 8, final paragraph. We assume that the Examiner means to claim that Gordon teaches a lens between a field of view and first ends of first and second optical fibers. However, we must again disagree with the Examiner.

Gordon does not teach a lens disposed between a field of view and first ends of optical fibers, where the first ends are oriented towards the field of view and second ends of the optical fibers are oriented towards sensor segments (see claim 1). Rather, Gordon teaches and shows a lens that is between a filter and ends of optical fibers that are oriented toward a sensor array. See Gordon, FIG. 1. In particular, Gordon's lens 21 is positioned between ends of optical fibers at area face 13 and a filter 20. A second lens 45 is then positioned between filter 20 and sensor array 16. See Gordon col. 3, lines 1-16; FIGs. 1, 5. Neither of these lenses are between a field of view and first ends of optical fibers, as recited in claim 14. Namely, if the Examiner compares Gordon's fiber ends at area face 13 with applicant's first ends, then Gordon's fibers lack second ends directed toward sensor segments.

Claim 32: Richardson in view of Gordon does not teach or suggest the elements of claim 32, in the context of independent claim 29.

Claim 37: Claim 37 depends from claim 36, which, as argued above, is not anticipated by Richardson. Richardson also does not render claim 36 obvious. Gordon does not remedy this failing of Richardson. For example, the combination of Richardson in view of Gordon does not teach or suggest:

"...orienting a second end of said second optical fiber toward said second linear sensor element and at a second distance, greater than said first distance, from said second end of said first optical fiber;"

and

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"orienting a second end of said third optical fiber toward said third linear sensor element and at a fourth distance, greater than said third distance, from said second end of said second optical fiber;"

Claim 36 is nonobvious in view of the combination of Richardson and Gordon, thus, claim 37 must also be nonobvious. Nonetheless, Richardson in view of Gordon does not teach or suggest the elements of claim 37 in the context of claim 36.

Claim Rejections – 35 U.S.C. § 103

Richardson in view of Hegg

Claims 4 and 19-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Richardson in view of U.S. Patent No. 4,904,049 ("Hegg"). Again, we respectfully disagree and traverse the rejection, for at least the following reasons.

Claim 4: Claim 4 depends from claim 1, and requires a first fiber optic faceplate configured to accommodate the first ends of the first and second optical fibers. Again, these first ends are oriented toward a field of view, and are closer together than second ends of the optical fibers, which are oriented toward sensor segments. Richardson does not teach optical fibers with such spacing. See, e.g., remarks in support of claim 1, above. Further, as the examiner recognizes, Richardson does not teach a fiber optic faceplate.

Hegg also fails to teach or suggest optical fibers with first ends, oriented toward a field of view, that are closer together than second ends, which are oriented toward sensor segments. Hegg teaches away from such spacing of optical fibers, reciting that fiber axes must be angled, and that: "exemplary axes 47A-47C of fibers 47-49 (FIG. 3) are oriented toward the exit." Hegg, col. 3, lines 26-27; see also col. 4, line 53 - col. 5, line 7. In order to angle the fibers such that their axes are oriented toward the exit, as shown, the fibers are further apart at ends oriented towards a projector and lens, and closer together at ends oriented toward the exit. See Hegg FIGs. 3-6. This is different from a first and second optical fibers having first ends located a first distance from one another and oriented toward a field of view, and second ends located a second distance, greater than the first distance, from one another and oriented toward a sensor segment.

Claim 4 is thus patentable over Richardson in view of Hegg, at least because the combined patents fail to teach or suggest applicant's unique orientation of optical fibers.

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However, Richardson in view of Hegg also fails to teach or suggest a fiber optic faceplate configured to accommodate the first ends of optical fibers that are oriented as in claim 1. Since Hegg does not teach such orientation of fibers, Hegg also cannot teach a faceplate for accommodating fibers in such an orientation. Richardson does not teach a faceplate, at all. Hegg's radiused faceplate is made to hold optical fibers that are further apart at ends oriented toward a light source and closer together at ends oriented toward an exit, in order to direct light toward the exit. See Hegg FIGs. 3-6; col. 3, lines 17-30; see also col. 3, lines 26-27, quoted above.

Independent Claim 19: Amended claim 19 recites an apparatus for effectively reducing a non-active gap of an optical sensor, including:

- a first fiber optic faceplate oriented toward a field of view and configured to accommodate a plurality of optical fibers;
- a second fiber optic faceplate oriented toward an optical sensor and configured to accommodate said plurality of optical fibers;
- a first optical fiber of said plurality of optical fibers having a first end mounted to said first fiber optic faceplate and a second end mounted to said second fiber optic faceplate; and
- a second optical fiber of said plurality of optical fibers having a first end mounted to said first fiber optic faceplate a first distance, less than said non-active gap, from said first optical fiber and said second optical fiber having a second end mounted to said second fiber optic faceplate a second distance, greater than said first distance, from said first optical fiber such that said second end of said first optical fiber and said second end of said second optical fiber are spaced to align with a first linear array and a second linear array, respectively, of said optical sensor.

As the Examiner notes, Richardson does not teach a faceplate, at all. Also, as shown, Richardson does not teach first and second optical fibers with (a) first ends mounted to a first faceplate that is oriented toward a field of view, at a first distance (from one another), and (b) second ends mounted to a second faceplate that is oriented toward an optical sensor, at a second

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distance (from one another), that is greater than the first distance. See, e.g., arguments in support of claim 1, above.

Hegg fails to teach a first and a second faceplate. The Examiner states that Hegg teaches a first fiber optic faceplate, and a "second flat surface." Office Action p. 10, second and fourth paragraphs. Respectfully, a "second flat surface" is not the same thing as a second fiber optic faceplate. Furthermore, the only flat surfaces recited in Hegg are part of Hegg's faceplate. "The faceplate 46 comprises respective flat surfaces 46A and 46B." Hegg col. 2, line 68 - col. 3, line 1. This is different from Applicant's first and second faceplates.

In addition, like Richardson, Hegg does not teach or suggest applicant's orientation of first and second optical fibers. The combination of Richardson and Hegg therefore fails under 35 U.S.C. § 103.

Claims 20-24 depend from claim 19, and benefit from like argument. Furthermore, claims 20-24 are patentable over Richardson in view of Hegg because the combined references do not teach or suggest the elements of claims 20-24, in the context of claim 19. In addition:

Claim 23 recites that first ends of said first optical fiber and said second optical fiber are mounted normal to a plane formed by said first fiber optic faceplate and said second ends of said first optical fiber and said second optical fiber are mounted normal to a plane formed by said second fiber optic faceplate.

In his rejection of claim 23, the Examiner states that Richardson discloses "optical fiber mounting blocks," which would be combinable with a "second flat surface" disclosed by Hegg. See Office Action p. 11, second full paragraph. We respectfully request the Examiner's clarification, since claim 23 does not recite mounting blocks. However, we contend that regardless of the Examiner's clarification, Richardson in view of Hegg does not render claim 23 *prima facie* obvious.

For example, as noted with respect to claim 19, neither Hegg nor Richardson recite first and second faceplates. Furthermore, neither reference recites optical fibers (note the plural) mounted normal to planes formed by first or second faceplates. As the Examiner notes, Richardson does not teach faceplates, at all. Hegg does not teach or suggest optical fibers mounted normal to a plane formed by a faceplate, instead reciting optical fibers mounted so that their axes are directed toward an exit pupil. As shown in Hegg FIGs. 3-6, this requires angling of

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the optical fibers, with perhaps the exception of fiber 48, FIG. 4. Reference number 48a appears to indicate an axis of fiber 48 (reference number 48a is not described in Hegg), which may be perpendicular to faceplate 46. However, all other optical fibers in Hegg are recited and depicted as angled toward an exit pupil. Hegg therefore does not teach fibers (plural) mounted normal to a faceplate. See Hegg col. 3, lines 1720 and 26-27; FIGs. 3-6. See also Hegg FIG. 8, depicting a face plate normal and a faceplate with optical fibers angled toward an exit pupil.

Claim 24 recites an optical sensor mounted to a second fiber optic faceplate. Again, Richardson in view of Hegg fails to teach or suggest applicant's second fiber optic faceplate. 24.

The apparatus of claim 19, further comprising said optical sensor mounted to said second fiber optic faceplate.

Claim Rejections – 35 U.S.C. § 103
Richardson in view of Hegg and Gordon

Claims 25-28, 33-35 and 38-40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Richardson in view of Hegg and further in view of Gordon. We must again respectfully disagree.

As shown, none of Richardson, Hegg or Gordon teach or suggest applicant's first and second optical fibers, which are spaced further apart at second ends oriented toward an optical sensor than they are at first ends oriented toward a field of view. Claims 25-28 and 33-35 inherit this limitation from claim 19. Claims 38-40 inherit this limitation from claim 36. The combination of Richardson, Hegg and Gordon therefore cannot render claims 25-28, 33-35 and 38-40 *prima facie* obvious.

Claims 25-27 and 33 additionally depend from claim 24, which recites a second fiber optic faceplate. As argued above, Richardson in view of Hegg does not teach applicant's second fiber optic faceplate. Gordon is completely mum as to a faceplate. The combined patents thus fail to render claims 25-27 *prima facie* obvious for this additional reason.

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CONCLUSION

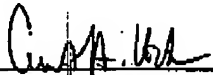
Given the amendments and remarks presented herein, we submit that each rejection presented in the Office Action of September 21, 2005 is overcome. We respectfully request withdrawal of each of the Examiner's rejections, and allowance of claims 1-43.

The due date for filing this Response with a Petition for One-Month Extension of Time was Saturday, January 21, 2006. Per 37 C.F.R. §1.7, *"When the day, or the last day fixed by statute or by or under this part for taking any action on paying any fee in the United States Patent and Trademark Office falls on Saturday, Sunday, or on a Federal holiday within the District of Columbia, the action may be taken, or the fee paid, on the next succeeding business day which is not a Saturday, Sunday, or a Federal holiday."*

Therefore, only the One-Month Extension Fee is believed due. The Commissioner is hereby authorized to charge this fee to deposit account No. 12-0600. Should any fee be deemed necessary in connection with this Response, please charge the same deposit account. The Examiner is encouraged to telephone the undersigned should any issues remain outstanding, or should questions arise regarding this Response.

Respectfully submitted,

23 JAN 2006
Date


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